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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,098

09/16/2003

Xiangzhong Wang

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EXAMINER

PASCAL, LESLIE C

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/665,098	Applicant(s) WANG, XIANGZHONG	
	Examiner Leslie Pascal	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 6 and 11-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Sekiya et al (6590686).

Sekiya et al teach means to control a laser (20, 22, 24, means to control a modulation module (118, 42), a temperature controller (24), wavelength controller (22) and a current controlling supply means (20).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 4 and 7-10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiya et al (US006590686) in view of Nagakubo (5900621).
Sekiya et al teach a temperature controller (30), a modulator bias controller (42) and digital control (output of element 36 in figure 8), a modulator bias controller (42), a temperature detection circuit (thermistor, column 4, line7), a temperature control circuit (Peltier element which is a type of thermo-electric cooler, column 4, line 9). Although

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Sekiya et al do not specifically teach a power controller, Nagakubo et al (5900621) teach that it is well known to use a power controller (22, figure 16 or 23 in figure 17) in order to control the power output by the modulator. In regard to claims 10 and 8, he teaches a power monitoring circuit (15), power control circuit (12) and power driver (in that he has a drive signals for the attenuator, it is obvious, if not inherent that there is some means to provide the drive signal within element 12). It would have been obvious to modify Sekiya et al with the power control means of Nagakubo in order to control fluctuations caused by the laser and modulator. In regard to claim 7, see element 20.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiya et al (US006590686) in view of Nagakubo (5900621) as applied to claims 1-2 above, and further in view of Carlson et al (6285476) in view of Stapleton et al (RE 35,716).

Although Sekiya et al does not teach specifics about how he provides the temperature control signal, Carlson et al teaches that is well known to use a PID control algorithm to provide the proper temperature setting for a laser (column 9, lines 51-56). Although Carlson does not specifically teach that he compares the temperature to a predetermined setting, Stapleton teaches comparing to a set point in order to provide a target (column 10, lines 14-21). It would have been obvious to provide the temperature control signal by utilizing a PID algorithm and comparing it to a set temperature as taught by Carlson and Stapleton in order to provide a stable temperature setting in order to avoid drift caused by temperature changes.

6. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al (6836622).

Kobayashi et al teach a method of controlling bias of a modulator (103) by generating a dither signal (112) and summing the dither signal (at TT) with a DC bias signal (118), receiving a signal related to the power from the Mach Zehnder (5), detecting bias error from a frequency component (107) and generating a DC bias voltage signal in response to the drift (119).

7. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi. Although Kobayashi does not specifically teach that he sums his dither signal with an automatic gain control signal, he has amplifiers in his feedback loop. It would have been obvious, if not inherent that the feedback loop be considered as an automatic gain control loop and therefore, the signal output would be an agc signal.

The following is a statement of reasons for the indication of allowable subject matter: the closest prior art of record (Sekiya and Kobayashi) do not teach nor render obvious having a pid control algorithm with the details of the wavelength controller and controlling the temperature based on the predetermined wavelength signal. In regard to claim 11, there is not a dither signal buffering circuit, nor is there a reason to modify either Sekiya or Kobayashi to include a buffering circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday, Friday 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leslie Pascal
Primary Examiner
Art Unit 2633